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| EXAMINER |
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MEHRA, INDER P

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| ART UNIT | PAPER NUMBER |
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2666

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/502,699

Applicant(s)

GRANT ET AL.

Examiner

Inder P Mehra

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This is in response to application dated: 2/11/00.

#### ***Specification***

2. The disclosure is objected to because of the following informalities:

Refer to page 15 lines 13 and 28, reference number 103 for control function is not shown in fig. 2.

Refer to line 21, "servers 114" should be "servers 112, as shown in fig. 2.

Refer to page 17 line 15, reference number 106 for "data packet" is not shown in fig. 2.

Refer to page 20 line 22, ADSL instead of XDSL is disclosed. XDSL is disclosed at page 12 lines 5-6 and page 13 lines 5-10.

Refer to page 21 line 18, "could undertaken" should be "could be undertaken".

Appropriate correction is required.

#### ***Drawings***

3. The drawings are objected to because, in fig. 4, it is not clear as to what "A" input to step 220 means? Where from it is coming from. . A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18-35, and 44-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 18 recites the following limitation:

- "the plurality of distribution" in line 4;
- "said interconnected gateways", in line 6;
- "said one of said interconnected gateways", in line 8.

There is insufficient antecedent basis for this limitation in the claim.

b. Claim 22 recites the limitation "the communication resources", in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

c. Claim 24 recites the limitation "the distribution point" in line 2. There is insufficient antecedent basis for this limitation in the claim.

d. Claim 31 (line 10) and claim 39 (line 11) recite the limitation "the codes". There is insufficient antecedent basis for this limitation in the claim.

e. Claim 35 recites the limitation "said home-gateways" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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- f. Claim 44 recites the limitation "the direct isolated" in line 11. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5, 9, 11, 14, 18-19, 21, 24-26, 29, 31-32, 34, 40, 41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by **Kamm et al** (US Patent No. 5,457,680), hereinafter, **Kamm**.

For claims 1, 9, 18, 24-25, 31, 40, 41 and 43 **Kamm** discloses, in reference to figs. 1 and 1A, a communication system comprising a core network (data communication network) coupled over multiple isolated connections to a plurality of distribution gateways Home (mobile data gateway) each providing network access capability to local data devices (mobile data radio terminals SU-1 through SU-3 and mobile voice telephone units ) serviceable thereby , at least some of the plurality of distribution gateways interconnected through communication resources (backbone 102 in fig. 1A), refer to col. 3 lines 40-45 and wherein said interconnected distribution gateways each includes:

- control functionality (CPU120 in fig. 1A) arranged to administer access to the core network (data communication network 100) through securing network access capability using the interconnected distribution gateways, as recited by claim 40,

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(refer to 104 and 204 in figs. 1 and 1A) via at least one of the multiple isolated connections (T1 in fig. 1, refer to fig. 1A), refer to col. 5 lines 55-65.

- Interconnecting at least some of the plurality of distribution to provide communication paths there between, **as recited by claim 18**, refer to 102 in figs. 1 and 1A.
- code arbitrates interconnection of the home-gateway with at least one further home gateway connectable to the core network, **as recited by claim 31**, refer to figs. 1 and 1A;
- wherein the codes reside in a computer readable medium, **as recited by claim 31**, refer to CPU120 in fig. 1A, refer to col. 5 lines 64-66.
- the consolidation function is operable having regard to congestion conditions on the multiple isolated connection, as recited by claim 42, refer to col. 12 lines 40-45, col. 12 lines 49-51;
- “encrypting communications between an associated device and the core network”, **as recited by claim 43**, refer to col. 21 lines 50-55.

For claims 2, 11, 19, 26 and 32, Kamm discloses the communication system of claim 1, as above, wherein the control functionality operates according to at least one of:

- a bandwidth-driven requirement (If mobile data gateway determines –additional bandwidth is required---or does not warrant as many channels----add or delete), refer to col. 12 lines 56-61;

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- a fault driven basis to secure access to the core network (determines if third the third signal measurement data is better than the first signal measurement data and second signal measurement data and if so----allocates with the server mobile data gateway, a new channel at the third base station-----), refer to col. 3 line 55 through col. 4 line 3.

For claims 5, 14, 21, 29, 34 and 43, Kamm discloses , “encrypting communications between an associated device and the core network”, refer to col. 21 lines 50-55.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 12, 27 and 42 are rejected under 35 U.S.C. 103(a) as being obvious over

**Kamm et al** (US Patent no. 5,457,680), hereinafter, Kamm in view of **Mahalingaiah et al** (US Patent No. 6,654,346), hereinafter, Mahalingaiah.

For claims 3, 12, 27 and 42, Kamm discloses all the limitations of subject matter, as above in paragraph 7, with the exception of the following limitations:

- wherein the control functionality includes a prioritization function (**as recited by claim 42**) that secures a guaranteed minimum bandwidth for communication with network for associated data equipment,.

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- Mahalingaiah discloses, “wherein the control functionality includes a prioritization function that secures a guaranteed minimum bandwidth for communication with network for associated data equipment, refer to col. 6 lines 8-16.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of prioritization function. The capability can be implemented by combining the system as taught by Kamm and Mahalingaiah at the Home media gateway. The suggestion/motivation to do so would have been to use the shared resources.

10. Claims 4, 13, 20, 28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kamm** as applied to claims 1, 9, 18, 24, 31 above, and further in view of **Shionozaki** (US Patent No. 6,496,479).

For claims 4, 13, 20, 28, and 33, Kamm discloses all the limitations of subject matter, as in paragraph 7 above, with the exception of the following limitation:

- wherein at least some of the isolated connections are point-to-point connections supporting digital subscriber line communications;

Shionozaki discloses, “wherein at least some of the isolated connections are point-to-point connections supporting digital subscriber line communications”, refer to col. 8 lines 4-7, col. 7 lines 40-45.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of using point-to-point connections supporting digital subscriber line. The capability can be implemented by combining the system as taught by Kamm and



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Shionozaki at the Home media gateway. The suggestion/motivation to do so would have been to provide digital communication to the subscribers at high speed.

11. Claims 6-8, 10, 15-17, 22-23, 30, 35-36 and 38-39 are rejected under 35 U.S.C. 103(a) as being obvious over **Kamm**, as applied to claims 1, 9, 18, 24 and 31 above, in view of **Davis et al** (US Patent No. 6,167,389), hereinafter, Davis.

For claims 6-8, 10, 15-17, 22-23, 35-36 and 38-39, Kamm discloses all the limitations of the subject matter with the exception of the following limitations, intermediate node:

- an optical transceiver for converting optical communications into electrical impulses, **as recited by claims 6 and 15**; and
- a transceiver coupled to a plurality of distribution points whereby the plurality of distribution points acquire access to the core network via the optical fiber, **as recited by claims 6 and 15**.
- “wherein the communication resources interconnecting -----include at least one of RF channel resources, optical connections, LAN (recited by claim 30), and wire line connections, **as recited by claims 7, 16, 22, 30, 35 and 38**;
- “a billing center coupled to the core network, the billing center configured to generate and record varying levels of charges for access to the core network in response to use by a distribution gateway and the core network, **as recited by claims 8, 17, 23, 36 and 39**.

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- where the control functionality provides a routing function for broadband communications between a plurality of interconnected distribution gateways, **as recited by claim 10**

Davis discloses the following limitations:

- an optical transceiver for converting optical communications into electrical impulses, **as recited by claims 6 and 15**; refer to 40a, 40b and 40c in fig. 1 and col. 5 lines 18-25 and
- a transceiver coupled to a plurality of distribution points whereby the plurality of distribution points acquire access to the core network via the optical fiber, **as recited by claims 6 and 15**, refer to fig. 1 and fig. 2, col. 6 lines 51 and 64.
- “wherein the communication resources interconnecting -----include at least one of RF channel resources, optical connections and wire line connections, **as recited by claims 7, 16, 22, 35 and 38**;refer to col.4 line 44.
- “a billing center coupled to the core network, the billing center configured to generate and record varying levels of charges for access to the core network in response to use by a distribution gateway and the core network, **as recited by claims 8, 17, 23 and 36**, refer to col. 6 lines 15-28.
- recording the varying level of charge in a database for subsequent billing purposes, **as recited by claims 36 and 39**, refer to col. 6 lines 25-28.
- where the control functionality provides a routing function for broadband communications between a plurality of interconnected distribution gateways, **as recited by claim 10**, refer to col. 4 lines 38-40.

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of optical fiber, RF channel, broadband and billing charges. The capability can be implemented by combining the system as taught by Kamm and Davis at the Home media gateway or subscriber's unit. The suggestion/motivation to do so would have been to provide digital communication to the subscribers at high speed (optical fiber).

12. Claims 37 is rejected under 35 U.S.C. 103(a) as being obvious over **Kamm** in view of **Davis et al.** as applied to claim 36 above, further in view of **Shionozaki** (US Patent No. 6,496,479).

For claim 37, Kamm discloses all the limitations of the subject matter, with the exception of the following limitation:

- the isolated connections are point-to-point connections supporting digital subscriber line communications;

Shionozaki discloses, "wherein the isolated connections are point-to-point connections supporting digital subscriber line communications", refer to col. 8 lines 4-7, col. 7 lines 40-45.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of using point-to-point connections supporting digital subscriber line. The capability can be implemented by combining the system as taught by Kamm, Davis and Shionozaki at the Home media gateway. The suggestion/motivation to do so would have been to provide digital communication to the subscribers at high speed.

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***Allowable Subject Matter***

13. Claim 44 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

14. Claims 45-46 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Prior Art***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Peters (US Patent No. 6,282,519) discloses a system for processing a batch which is distributed into a plurality of independent segments.

***Conclusion***

16. Any enquiry concerning this communication should be directed to Inder Mehra whose telephone number is (703) 305-1985. The examiner can be normally reached on Monday through Friday from 8:30AM to 5:00 PM.

If attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Seema Rao , can be reached on (703) 308-5463. Any enquiry of a general nature of relating to the status of this application or processing should be directed to the group receptionist whose telephone number is (703) 305-4700.

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17. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to (703) 972-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive,  
Arlington, VA, sixth floor (Receptionist).

*Inder Mehra*  
Inder Mehra 3/14/04

March 14, 2004



D. D. D.  
PRIMARY EXAMINER